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http://hdl.handle.net/2324/19401

出版情報：ESAKIA. 50, pp.93-96, 2011-02-28. 九州大学大学院農学研究院昆虫学教室

ESAKIA, (50): 93-96. February 28, 2011

Coenochilus thailandicus (Coleoptera, Scarabaeidae, Cetoniinae), a New Species of Cremastocheilini from Thailand

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Abstract. *Coenochilus thailandicus* Maruyama et Ueno sp. nov. belonging to the *striatus* Westwood, 1874 species group is described based on specimens collected in Khao Yai National Park, East Thailand.

Key words: taxonomy, Coleoptera, Scarabaeidae, Cremastocheilini, *Odontotermes*, Khao Yai National Park, flight interception trap.

Introduction

The cetoniine genus *Coenochilus* Schaum, 1841 belonging to the tribe Cremastocheilini comprises 74 species from subtropical to tropical areas of the Ethiopian and Oriental zoogeographical regions (Arrow, 1910; Krajcik, 1998; Schein, 1953, 1954). Termitophily has been confirmed in some species (Wasmann, 1900, 1918). Although no bionomical information has been reported in most species, the close morphological resemblance among *Coenochilus* species suggests termitophily in all congeners. Recently, M. Maruyama (with W. Sakchoowong, Takashi Komatsu and Yuji Katayama) visited Khao Yai National Park, East Thailand, and collected a series of *Coenochilus* beetles by flight interception traps. The specimens comprised two species, of which one was found to be a new species.

Photographs were taken with a Canon EOS Kiss X1 with a Canon MP-E 65 mm 1–5× macro lens and mounted using automontage software CombineZM. The male genitalia were cleaned with 5% KOH solution for 10 hours at 25°C, washed with water and photographed when dry. The holotype is deposited in the Kyushu University Museum, Fukuoka, and paratypes are in the National Parks, Wildlife and Plant Conservation Department, Bangkok, and the authors' private collections.

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Coenochilus thailandicus Maruyama et Ueno sp. nov.

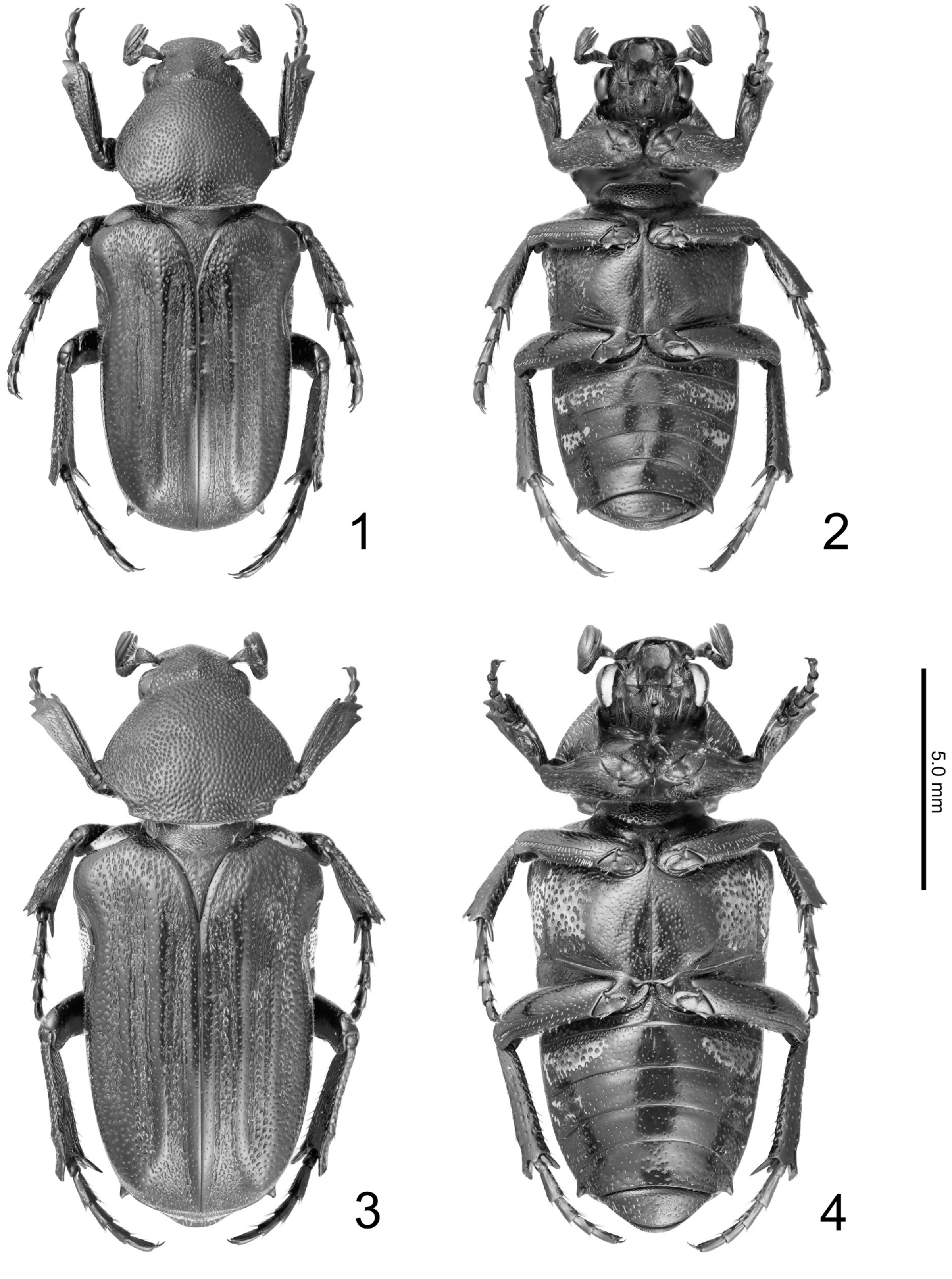
Type series. Holotype, male, [**Thailand**]: "THAI: Khao Yai N. P., Nakhon Ratchasima, Pha Kluai Mai (650 m) 27 IX – 4 X 2007, by FIT, Maruyama & Katayama" (Kyushu University Museum). Paratypes, 42 ♂♂, 66 ♀♀, same data as holotype; 2 ♀♀, same data, but "KM33 (700m)."

Etymology. In referring to the type locality.

Description.

Male: Head (Figs. 1, 2) with surface coarsely with setiferous punctures; clypeal margin faintly emarginated medially, gently produced laterally; slightly depressed around lateral areas; eye process glabrous except apical to posterior margins coarsely punctured and with 4-6 standing setae; occiput with a small tubercule medially.

Pronotum (Figs. 1, 2) semi-circular, 1.17-1.18 times as wide as long; anterior margin somewhat rounded; lateral margins gently rounded; postero-lateral margin weakly angled; disc with very shallow medial groove from middle to posterior margin; surface densely with setiferous punctures that are becoming larger laterally and con-



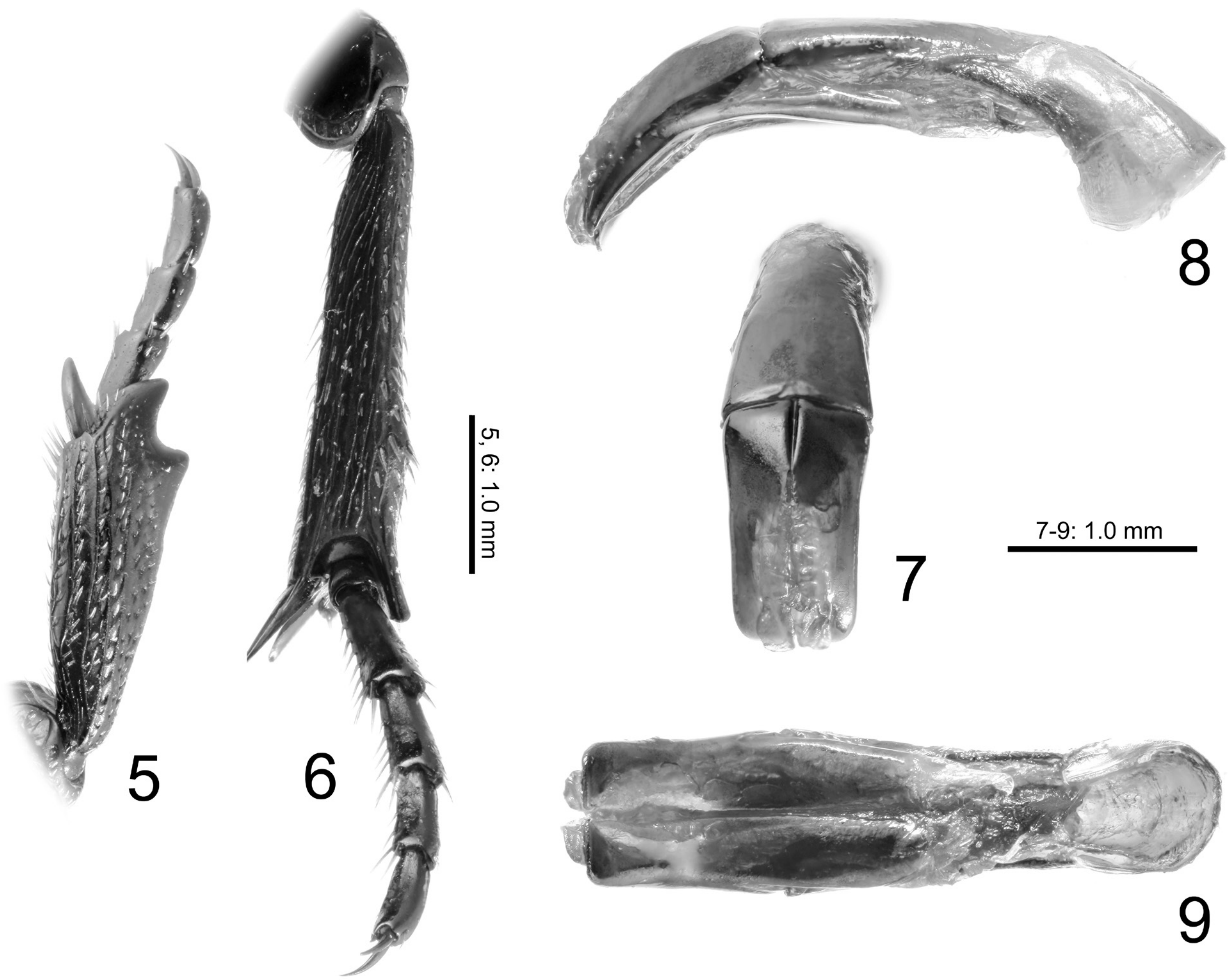
Figs. 1-4. *Coenochilus thailandicus* Maruyama et Ueno sp. nov. 1, 2, Male facies (holotype); 3, 4, female facies (1, 3, dorsal view; 2, 4, ventral view).

nected each other around lateral margin.

Elytra (Figs. 1, 2) slightly narrowed apically, about 1.5 times as long as wide (maximum length/maximum width between humeri), well margined except for posterior margin; with 3 pairs of striae; 1st (sutural) stria sparsely with minute setiferous punctures; 2nd stria widest, narrowed apically, disappeared near apical tubercule, sparsely with small setiferous punctures; 3rd stria obscure, appeared from around basal 1/3 and connected with apical tubercule; surface between striae densely with setiferous horseshoe-shaped punctures that are becoming shorter and more transverse laterally, and their setae becoming longer and more conspicuous apically.

Scutellum densely with round, rather large, shallow punctures. Metaventrite (Fig. 2) shallowly depressed medially, with a pair of whitish velvety patch laterally.

Legs (Figs. 1, 2) rather simple; trochanters with tuft of setae near apices; femora generalized, with 2 rows of setae ventrally, of those posterior row on fore femur forming a shallow groove; tarsi stout, each almost as long as tibiae. Fore tibia (Fig. 5) gently widened apically; apex with 2 dorsal processes (sometimes basal one absent in old-aged specimen) and sometimes with 1 or 2 minute round processes around middle; anterior surface densely with setiferous, elongate punctures that are forming some striae, except for apical dorsal margin. Mid tibia gently widened apically; ventral margin almost straight, anterior surface moderately with setiferous punctures on which setae are becoming longer apically; posterior surface with several striae, each with row of setae; apical half of ventral margin with a row of setae. Hind tibia (Fig. 6) gently widened apically; ventral margin almost straight; structure of surface almost same as mid tibia, but apical 1/3 of ventral margin with row of dense, recumbent



Figs. 5-9. *Coenochilus thailandicus* Maruyama et Ueno sp. nov. 5, Right fore tibia and tarsus, anterior view; 6, right hind tibia and tarsus, posterior view; 7-9, aedeagus (7, apico-dorsal view; 8, lateral view; 9, ventral view).

setae.

Abdomen with tergites III-V shallowly excavated medially; tergite III and IV each with a pair of whitish velvety patches laterally; tergite VI with lateral projections. Pygidium transverse, margined, finely convex anteromedially; surface with whitish velvety patch except mesal area, and densely with round, margined setiferous punctures that are connected around posterior margin to form some irregular transverse striae.

Genitalia as in Figs. 7-9.

Female: Body (Figs. 3, 4) more robust and larger. Row of setae on ventral margin of hind tibiae sparse. Abdomen (Fig. 4) with tergites III-V not depressed medially. Pygidium shorter, narrower, almost circular.

Body length. Male: 9.5-11.5 mm (average: ≈ 11.0 mm); female: 10.5-12.0 mm (average: ≈ 11.5 mm) (N=15, for each sex).

Biology. All specimens were collected using flight interception traps. Numerous colonies of *Odontotermes*, which is a termite genus known to host Indian *Coenochilus* species (Wasmann, 1918), were observed at the collection sites. Therefore, *Odontotermes* termites could host *C. thailandicus*.

Diagnosis and systematic position. This species belongs to the *striatus* Westwood, 1874 species group based on the following shared character states: 1) occiput with a tubercule, 2) elytra with three pairs of striae and 3) ventral body surface with white velvety patches. The new species is very similar to *C. sumatranus* Westwood, 1883 (*Csm*) described from Sumatra, but can be distinguished from it by the absence of medial carina on the pygidium (*Csm* has a fine medial carina), the presence of a medial groove on the pronotal disc (absent or very weak in *Csm*), the pronotal hind angle being not produced and rather rounded (produced laterally and right angled in *Csm*), the ventral surface of the male abdomen curved in lateral view (almost straight in *Csm*) and the clypeus being only faintly emarginated medially. This species may also be allied with *C. striatus* recorded from China and Japan and *C. tonkinensis* Moser, 1910 from Vietnam, but these species differ from *C. thailandicus* by the body surface being shinier, the body slenderer, the punctures on the pronotum being small, smaller than the spaces between the punctures, the pronotal disc lacks a medial groove, and the pygidium with a medial carina that extends from the base.

Acknowledgments

M. Maruyama and W. Sakchoowong thank Mr. Narong Mahannop, the superintendent of Khao Yai National Park, for his support of fieldworks by M. Maruyama, W. Sakchoowong, T. Komatsu and Y. Katayama. Permission for sampling was granted by the National Parks, Wildlife and Plant Conservation Department, Thailand (No. 0907/14255). M. Maruyama thanks Mr. Yasuhiko Hayashi and Mr. Noboru Ito for their financial support in his collecting trip in 2007 and T. Komatsu and Y. Katayama for their assistance in the field. This paper is supported by a Grant-in-Aid for Scientific Research from JSPS (Young Scientists B, 22770085) funded to M. Maruyama.

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